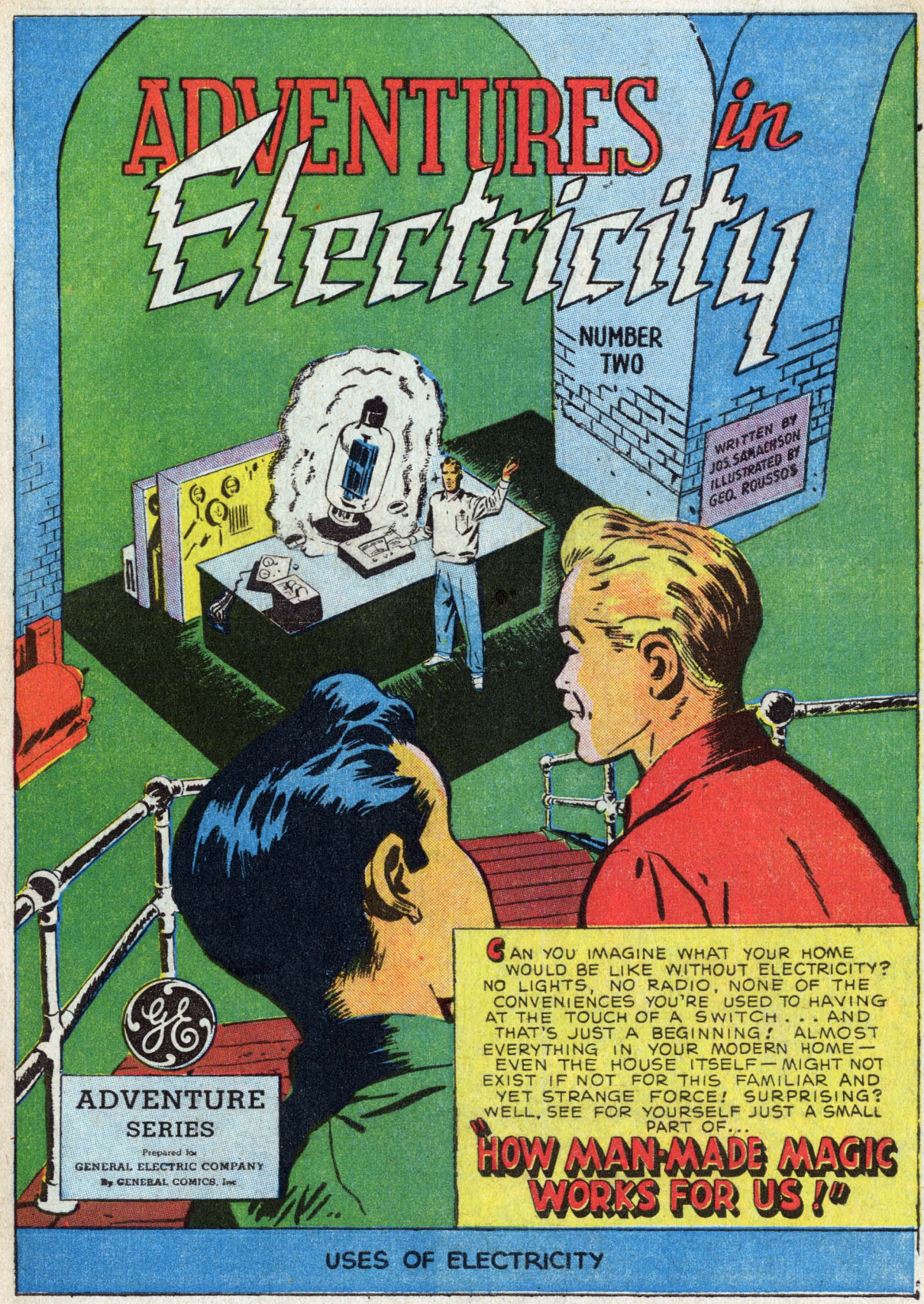
ADVENTURES in Electricity
NUMBER TWO
WRITTEN BY JOS. SAMACHSON
ILLUSTRATED BY GEO. ROUSSOS
ADVENTURE SERIES
Prepared for GENERAL ELECTRIC COMPANY
By GENERAL COMICS, Inc
CAN YOU IMAGINE WHAT YOUR HOME WOULD BE LIKE WITHOUT ELECTRICITY? NO LIGHTS, NO RADIO, NONE OF THE CONVENIENCES YOU'RE USED TO HAVING AT THE TOUCH OF A SWITCH . . . AND THAT'S JUST A BEGINNING! ALMOST EVERYTHING IN YOUR MODERN HOME — EVEN THE HOUSE ITSELF — MIGHT NOT EXIST IF NOT FOR THIS FAMILIAR AND YET STRANGE FORCE! SURPRISING? WELL, SEE FOR YOURSELF JUST A SMALL PART OF...
"HOW MAN-MADE MAGIC WORKS FOR US!"
USES OF ELECTRICITY

"OARS GLEAM IN THE MOONLIGHT AS A MIGHTY WAR TRIREME HEADS FOR A PEACEFUL CITY ON THE EDGE OF THE ANCIENT MEDITERRANEAN..."
HELP! RAIDERS!
..."AS THE SHIP TOUCHES SHORE..."
BEGONE, THIEVES! YOU WILL GAIN NO LOOT FROM THIS RAID!
2
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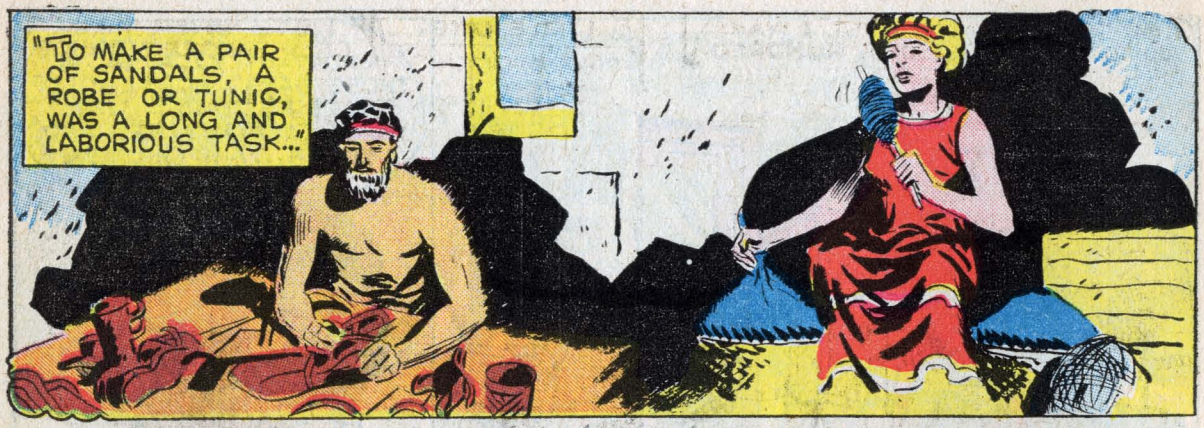
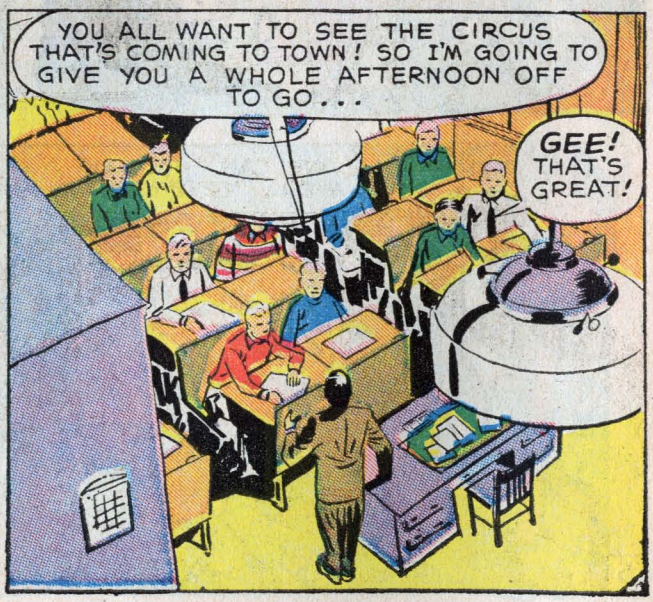
YES, BOYS, IN THOSE DAYS STRANGERS WERE FEARED AS ENEMIES ... AS SLAVE-RAIDERS!!
GOLLY... SLAVE—RAIDERS!!
YES, SLAVES WERE IMPORTANT BECAUSE, IN THOSE DAYS, HOUSEHOLD TASKS REQUIRED THE WORK OF MANY MEN AND WOMEN... AND CHILDREN, TOO!
"THERE WERE NO CONVENIENT FAUCETS, NO PIPES TO BRING WATER ..."
"DISHES HAD TO BE SHAPED SLOWLY, ONE BY ONE, ON A POTTER'S WHEEL..."
"EVEN FARMING WAS SLOW AND INEFFICIENT..."
3



"FOR ALL THESE JOBS... HOMES HAD DOZENS AND DOZENS OF SLAVES!"

OF COURSE, NOWADAYS WE DON'T PERMIT SLAVERY... BUT THINGS GET DONE AROUND THE HOUSE BETTER THAN EVER!
SURE, WE JUST FLIP A SWITCH OR PUSH A BUTTON!



...BUT THERE'S A CATCH! FIRST, I WANT YOU TO MAKE A LIST OF A HUNDRED DIFFERENT THINGS AROUND YOUR HOUSES THAT DEPEND ON ELECTRICITY...AND THEN YOU'LL SEE THE CIRCUS! YOU CAN ALL WORK TOGETHER ON THE SAME LIST. FAIR ENOUGH?
A HUNDRED?!
A LITTLE LATER...
"FAIR ENOUGH," HE SAYS? PHOOEY...IT'S A DOUBLE-CROSS!
WE'LL NEVER THINK OF A HUNDRED THINGS IN A HUNDRED YEARS! I'VE BEEN TRYING TO MAKE A LIST... KNOW WHAT I'VE GOT?
"ELECTRIC CLOCKS, LIGHTS, RADIOS, REFRIGERATORS, TELEPHONES, VACUUM CLEANERS, HEATERS, TOASTERS, COFFEE PERCOLATORS..."
POP!
MAYBE WE CAN THINK UP A FEW MORE... BUT WE'LL NEVER GET A HUNDRED!

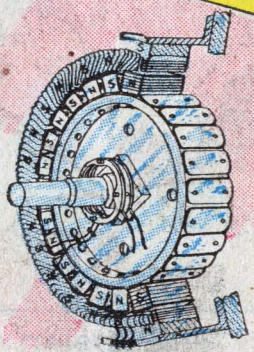
CIRCUS
DON'T MISS IT
STUPENDOUS!
"DON'T MISS IT," THEY SAY... HOW CAN WE HELP MISSING IT?
HEY, JOHNNY, YOUR BROTHER'S AN ELECTRICAL ENGINEER...
YEAH, MAYBE ED CAN...
YOU BET! COM'ON, FELLOWS!
WOW, WHAT A LAYOUT!
GOLLY, WISH WE COULD USE ALL THIS ON OUR LIST!
CAN'T DO IT... THIS SET-UP ISN'T IN MOST HOUSES.
AND LATER...
AS ED POWERS AGREES TO HELP AND LEADS THE WAY OUT OF HIS LABORATORY...
WELL, SUPPOSE FIRST WE TRY TO FIGURE OUT WHAT ELECTRICITY CAN DO. NOW LET'S SEE...
OKAY. THERE'S HEAT... BUT WE ALREADY HAVE DIFFERENT KINDS OF HEATERS ON THE LIST.
AND THERE'S LIGHT... BUT WE HAVE THAT, TOO.
6

SLAVE PRINTED

LIGHT AND HEAT—YES, THEY GO TOGETHER... FOR EXAMPLE, IN A BULB...
WHAT DO YOU MEAN, ED?
"WELL, AN ELECTRIC CURRENT IN A WIRE CONSISTS OF FAST-MOVING ELECTRONS. THE HEAT COMES FROM THE ENERGY THEY HAVE TO SPEND GETTING THROUGH THE WIRE..."
THIS SURE IS WARM WORK, FELLOWS!
"AND WHEN THE WIRE GETS HOT ENOUGH... AS IT DOES IN THE FILAMENT OF A BULB... IT GLOWS WITH LIGHT!"
WITH THIS THIN WIRE TO SQUEEZE THROUGH ... OF COURSE WE GET WHITE HOT!
NOW, HOW ABOUT ANOTHER APPLICATION OF ELECTRICITY?
THAT'S RIGHT, THINGS THAT WORK WITH MOTORS! WE ALREADY HAVE CLOCKS AND VACUUM CLEANERS...
WELL, IT MAKES THINGS MOVE!
"BUT HOW ABOUT ELECTRIC TRAINS—THE TOYS, AS WELL AS THE REAL THINGS?"
HEY, DAD, LOOK AT IT PULL ALL THOSE CARS!
IT CERTAINLY HAS A POWERFUL LITTLE MOTOR.
ELECTRIC TRAINS
7

GOOD IDEA... MOTORS ARE USED EVERYPLACE! AND THEY ALL DEPEND ON SOMETHING WE HAVEN'T MENTIONED YET... MAGNETISM!

"ELECTRICITY IS USED TO CREATE MAGNETS... AND THE "ATTRACTING" AND "REPELLING" POWER OF MAGNETS IS THE BASIS OF ELECTRIC MOTORS."



WELL, NOW WE'RE GETTING PLACES... BUT WE STILL HAVE A LONG WAY TO GO.

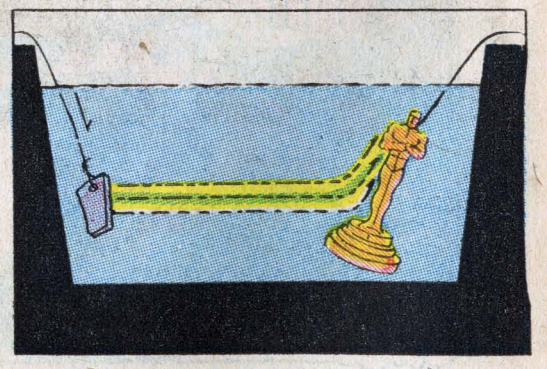
HERE'S A HINT, FELLOWS! ANYBODY KNOW WHY THIS TROPHY LOOKS SO BRIGHT AND SHINY?

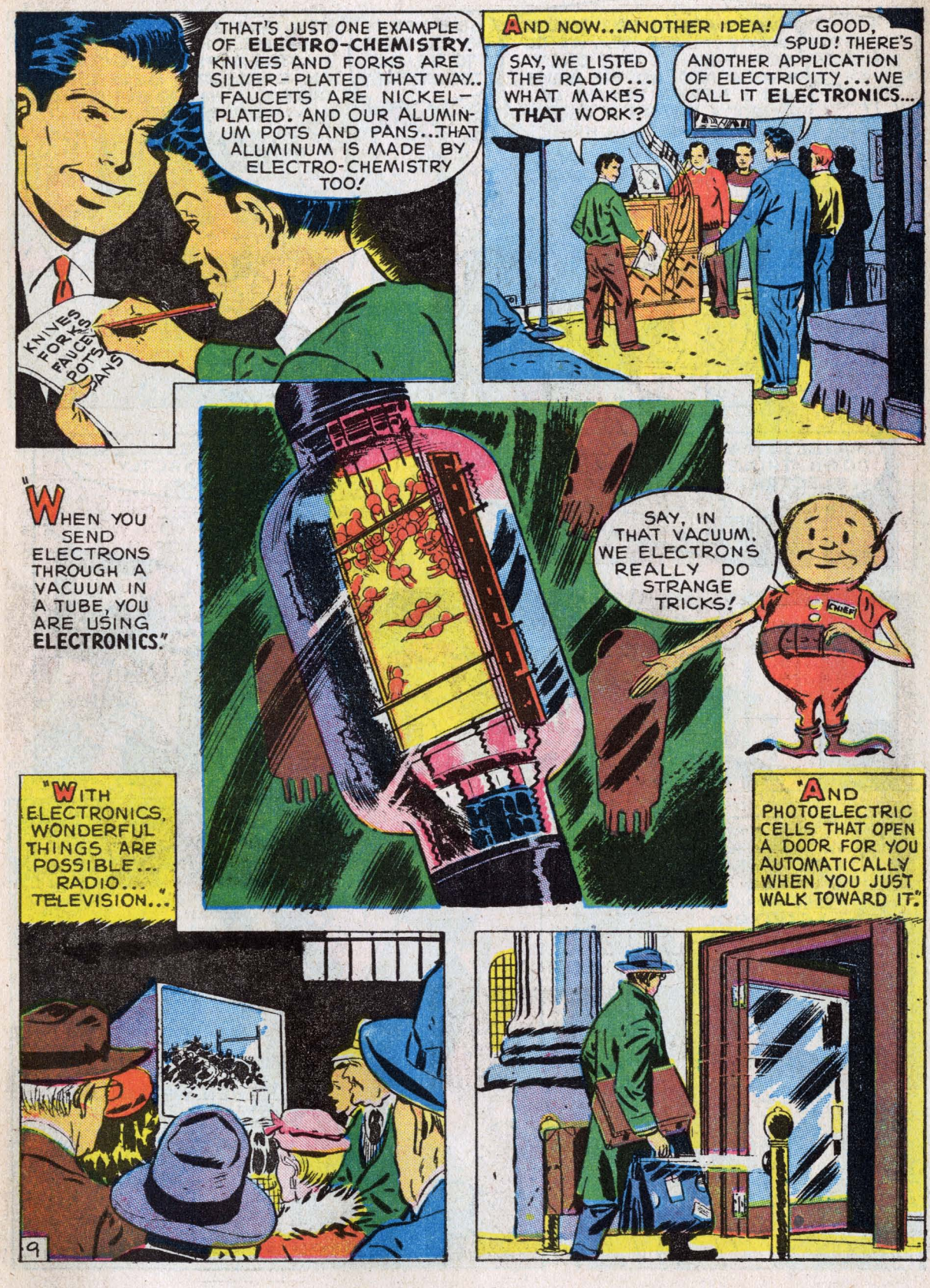
AND SO, THE LIST GROWS... ELECTRIC TRAINS, MIXER...

SURE — IT'S CHROMIUM PLATED!

RIGHT... AND THE PLATING IS DONE WITH ELECTRICITY!

"TINY ATOM-SIZED PARTICLES OF METAL ARE CARRIED BY ELECTRICITY THROUGH AN ACID SOLUTION... AND MAKE A LANDING ON THE TROPHY!"

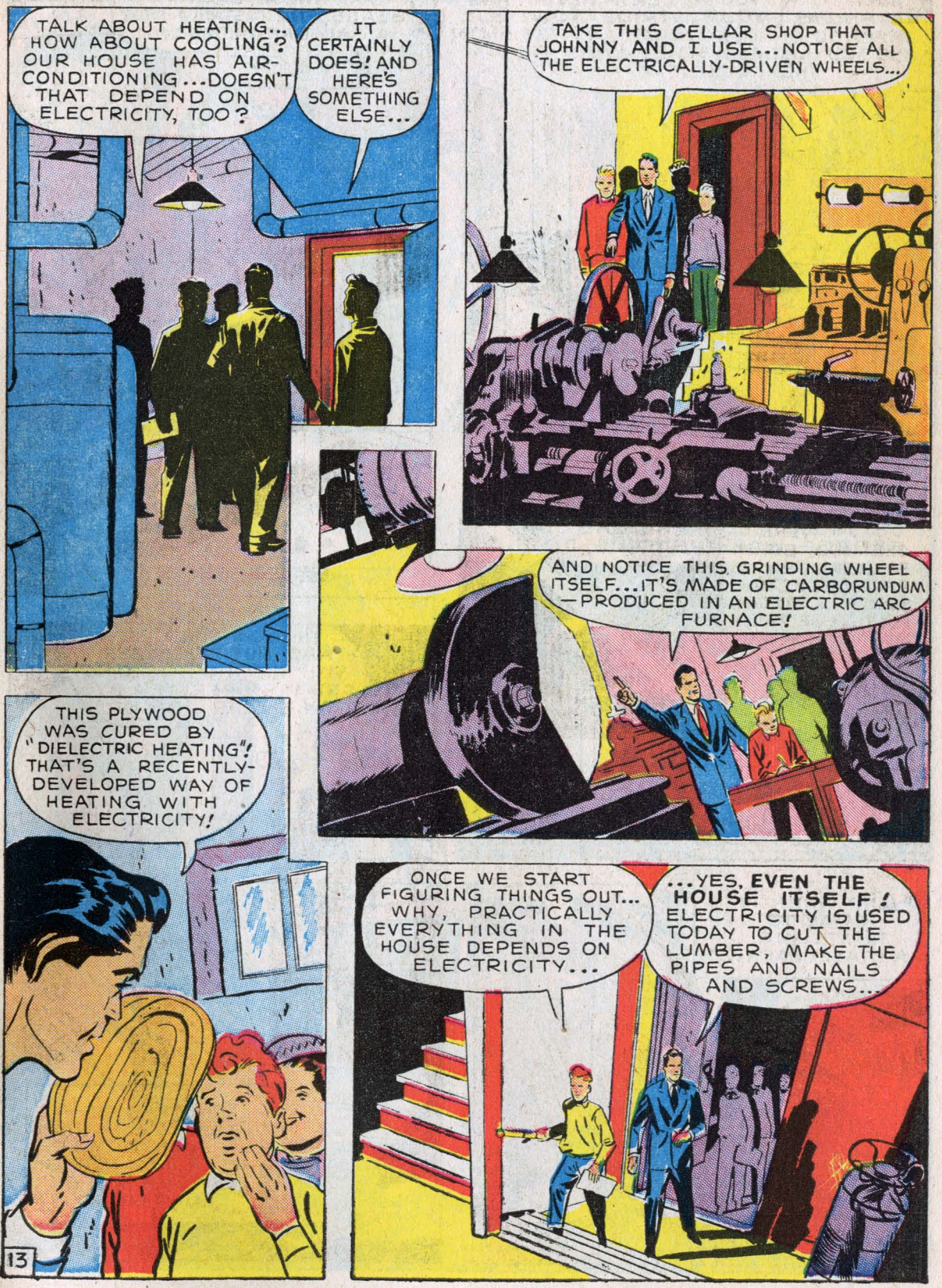



THAT'S JUST ONE EXAMPLE OF ELECTRO-CHEMISTRY. KNIVES AND FORKS ARE SILVER-PLATED THAT WAY.. FAUCETS ARE NICKEL-PLATED. AND OUR ALUMINUM POTS AND PANS...THAT ALUMINUM IS MADE BY ELECTRO-CHEMISTRY TOO!
KNIVES
FORKS
FAUCETS
POTS
PANS
AND NOW...ANOTHER IDEA!
SAY, WE LISTED THE RADIO... WHAT MAKES THAT WORK?
GOOD, SPUD! THERE'S ANOTHER APPLICATION OF ELECTRICITY...WE CALL IT ELECTRONICS...
"WHEN YOU SEND ELECTRONS THROUGH A VACUUM IN A TUBE, YOU ARE USING ELECTRONICS."
SAY, IN THAT VACUUM, WE ELECTRONS REALLY DO STRANGE TRICKS!
CHIEF
"WITH ELECTRONICS, WONDERFUL THINGS ARE POSSIBLE... RADIO... TELEVISION..."
"AND PHOTOELECTRIC CELLS THAT OPEN A DOOR FOR YOU AUTOMATICALLY WHEN YOU JUST WALK TOWARD IT."
9

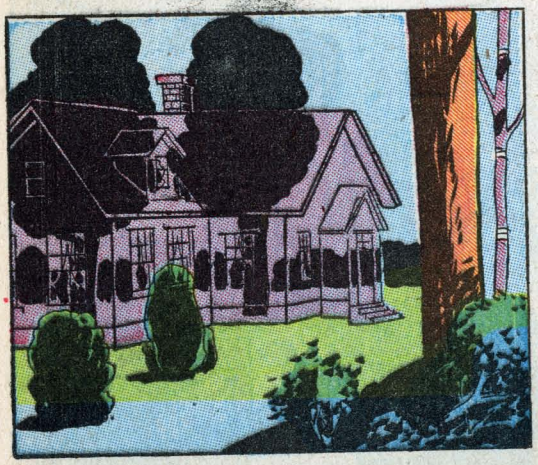
P-H-O-T-O-E-L-E-C--
WAIT A MINUTE... DON'T WRITE THAT DOWN. WE'RE SUPPOSED TO LIST ONLY WHAT'S AROUND THE HOUSE... AND I NEVER HEARD OF ANYBODY HAVING A PHOTO-ELECTRIC CELL IN HIS HOUSE!
GOSH, SPUD, DO YOU HAVE TO BE SO TECHNICAL?
NOW TAKE IT EASY...HE'S RIGHT — UNLESS ONE OF YOU IS A PHOTOGRAPHY "BUG" WITH AN EXPOSURE METER. BUT THERE IS A WAY TO GET IT LISTED ...ANYONE KNOW HOW?
MAYBE... MAYBE YOU COULD PUT DOWN THINGS THAT THE PHOTO-ELECTRIC CELL HELPED MAKE!
GO TO THE HEAD OF THE CLASS, SPUD! THAT'S EXACTLY HOW TO DO IT!
THE STEEL IN MANY KNIVES, FOR INSTANCE, IS MADE WITH ELECTRONIC TUBE "CONTROL APPARATUS."
"THEN WE CAN ADD STEEL, GLASS AND PAPER... AND HATS, COATS, SUITS, SHIRTS.. ANYTHING MADE OF CLOTH! BECAUSE THE MACHINES THAT MAKE THEM ARE CONTROLLED BY ELECTRICITY!"

THEN HOW ABOUT BOOKS? THEY HAVE A CLOTH BINDING, TOO!
AND NEWSPAPERS... ED ALREADY MENTIONED PAPER...
"BUT EVEN IF YOU GOT THE PAPER SOME OTHER WAY, YOU'D STILL NEED ELECTRICITY TO PRINT THEM. NEWSPAPERS USE STEREOTYPES... THEY'RE MADE BY ELECTRO-PLATING, TOO."
"AND ELECTRIC POWER RUNS THE PRESSES...
"AND THEN THERE'S FURNITURE— THE WOOD'S CUT BY ELECTRICALLY-DRIVEN SAWS, TURNED ON ELECTRICALLY-DRIVEN LATHES..."
OKAY, JOE, GIVE IT THE JUICE!

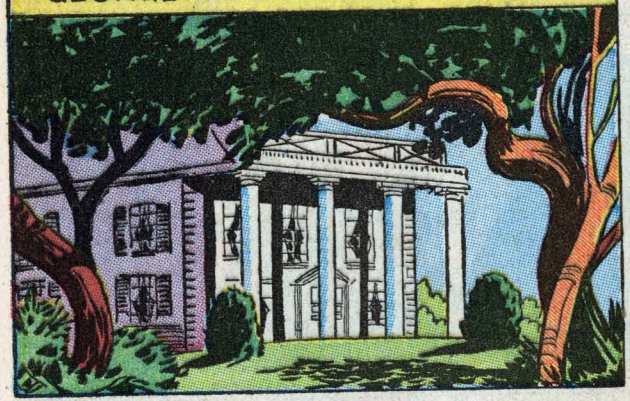
HOLD IT, YOU FELLOWS... DON'T GO SO FAST!
YOU'RE CERTAINLY HITTING YOUR STRIDE NOW! BUT, COME ALONG, AND I'LL SHOW YOU A FEW THINGS YOU MAY NOT HAVE THOUGHT OF YET...
TAKE THESE ORDINARY BEANS, FOR INSTANCE—NOT A BAD ONE IN THE LOT!
"DID YOU KNOW THEY WERE CHECKED, BEAN BY BEAN, BY A PHOTOELECTRIC SORTER... 80,000 POUNDS OF THEM IN A SINGLE DAY?"
THIS OIL FURNACE WAS PUT TOGETHER WITH ELECTRIC WELDING! AND IT'S OPERATED BY AN ELECTRIC MOTOR!
THIS PAINT ON THE WALLS WAS MIXED WITH THE HELP OF A COLOR-DETECTOR... AND THERE'S ELECTRICITY AGAIN! IT CAN DISTINGUISH BETWEEN TWO MILLION DIFFERENT SHADES OF COLOR!
WOW! I DIDN'T KNOW THERE WERE THAT MANY!
12


TALK ABOUT HEATING... HOW ABOUT COOLING? OUR HOUSE HAS AIR-CONDITIONING...DOESN'T THAT DEPEND ON ELECTRICITY, TOO?
IT CERTAINLY DOES! AND HERE'S SOMETHING ELSE...
TAKE THIS CELLAR SHOP THAT JOHNNY AND I USE...NOTICE ALL THE ELECTRICALLY-DRIVEN WHEELS...
AND NOTICE THIS GRINDING WHEEL ITSELF...IT'S MADE OF CARBORUNDUM —PRODUCED IN AN ELECTRIC ARC FURNACE!
THIS PLYWOOD WAS CURED BY "DIELECTRIC HEATING"! THAT'S A RECENTLY-DEVELOPED WAY OF HEATING WITH ELECTRICITY!
ONCE WE START FIGURING THINGS OUT... WHY, PRACTICALLY EVERYTHING IN THE HOUSE DEPENDS ON ELECTRICITY...
...YES, EVEN THE HOUSE ITSELF! ELECTRICITY IS USED TODAY TO CUT THE LUMBER, MAKE THE PIPES AND NAILS AND SCREWS...

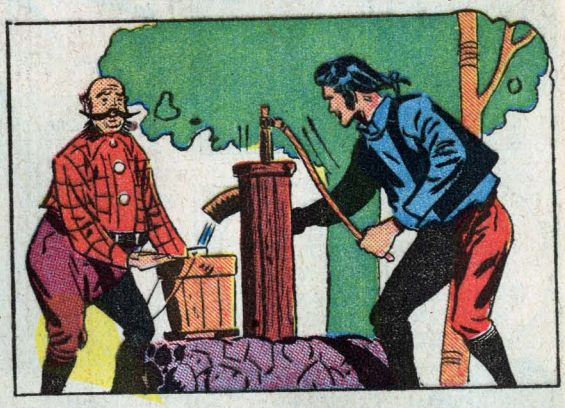
"TAKE AWAY EVERYTHING THAT DEPENDS ON ELECTRICITY... AND YOU JUST ABOUT TAKE AWAY THE HOUSE!"



"GOOD HOUSES, TOO... EVEN IF THEY WEREN'T SO COMFORTABLE AND CONVENIENT! LET'S LOOK AT ONE OF THOSE OLD MANSIONS OF GEORGE WASHINGTON'S TIME..."



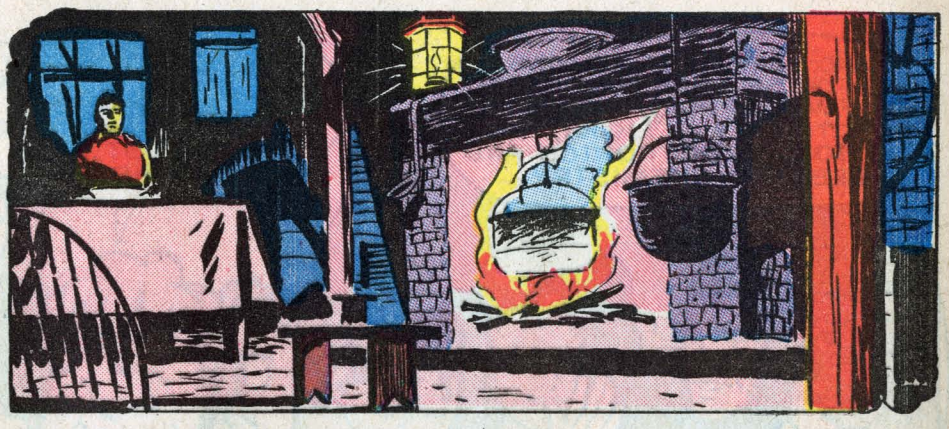
"WE HAD PROGRESSED A LITTLE SINCE ANCIENT DAYS... BUT STILL THERE WERE NO ELECTRIC PUMPS TO DRIVE WATER THROUGH PIPES! SO..."



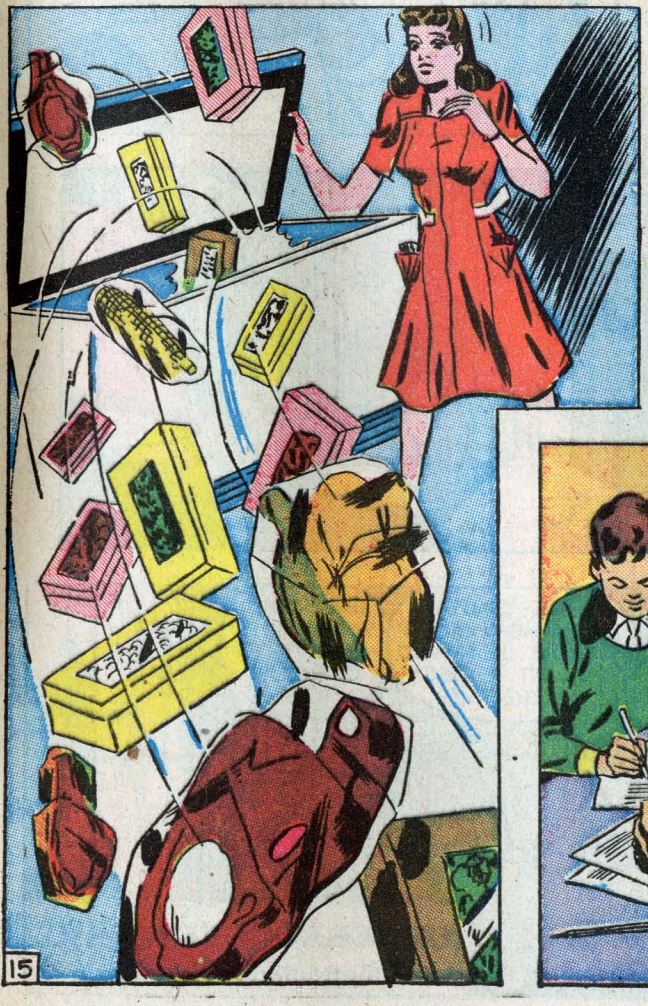
"AND WHEN IT CAME TO TRAVELLING, A STAGECOACH..."

..."INSTEAD OF A PLANE, OR TRAIN, OR AUTOMOBILE, ALL OF THEM DEPENDING SOMEHOW ON ELECTRICITY."

"IN THE HOUSE ITSELF, COOKING WAS DONE IN HEAVY OLD IRON POTS INSTEAD OF CONVENIENT ALUMINUM PANS...AND AFTER DARK THERE WAS ONLY THE DIM LIGHT OF LAMPS AND LANTERNS...



"AND THE MEALS! OUR COUNTRY ALWAYS HAD PLENTY OF FOOD... BUT IN **THOSE** DAYS PEOPLE ATE ONLY WHAT WAS GROWN NEARBY! NO FRUITS AND VEGETABLES BROUGHT FROM THOUSANDS OF MILES AWAY...NO MEAT KEPT FRESH LONG PAST THE SLAUGHTERING SEASON... BECAUSE THERE WAS NO ELECTRIC REFRIGERATION, NO "QUICK FREEZING"!



THERE WAS ANOTHER THING YOU MIGHT REMEMBER ABOUT GEORGE WASHINGTON'S DAY... PEOPLE HAD BAD TEETH! GEORGE HIMSELF SUFFERED. THERE WAS NO MODERN DENTISTRY... NO ELECTRIC X-RAYS TO DISCOVER HIDDEN CAVITIES...

OR BROKEN BONES? REMEMBER WHEN I FELL AND BROKE THIS ARM? GOSH, IT WOULD NEVER HAVE KNIT RIGHT IF THE DOCTOR HADN'T USED X-RAYS TO SEE THE BONES!

GUESS WE CAN EVEN ADD "US" TO THE LIST! WE MUST HAVE A LOT MORE THAN **100** NOW!

AND REMEMBER, FELLOWS, ALL THESE USES ARE BASED ON FIVE APPLICATIONS OF ELECTRICITY... LIGHT, HEAT, MOTION, ELECTRONICS AND ELECTRO-CHEMISTRY.
BOY, OH, BOY, WAIT TILL WE SHOW TEACHER OUR LIST! BET HE THOUGHT HE WAS PUTTING SOMETHING OVER ON US!... OR DID HE?
GOSH, I WONDER!
COME TO THINK OF IT... MAYBE HE EXPECTED US TO FIGURE OUT A LIST LIKE THIS! I'LL BET THAT'S WHAT HE WAS AFTER ALL THE TIME!
I WOULDN'T BE SURPRISED!
CIRCUS DON'T MISS IT STUPENDOUS! MAGICAL! Come!
SURE-'CAUSE LOOK HOW MUCH WE'VE LEARNED ABOUT ELECTRICITY!
OH BOY! NOW WE SEE THE CIRCUS, TOO!
GENERAL ELECTRIC
Schenectady, New York
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